

The Effects of Green Management and Digital-Based Training on Human Resource Performance: The Mediating Role of E-Performance at the Regional Secretariat of Pidie Regency

Sri Mutia, Irwan Safwadi, Isthafan Najmi

Faculty of Economics and Business, Abulyatama University, Indonesia, Aceh

DOI: <https://doi.org/10.47772/IJRISS.2026.100800053>

Received: 14 August 2026; Accepted: 19 August 2026; Published: 25 August 2026

ABSTRACT

The performance of State Civil Apparatus at the Regional Secretariat of Pidie Regency remains below the organization's target, creating a need to strengthen green management practices, digital-based training, and the implementation of E-Performance. This study examines the direct effects of Green Management and Digital-Based Training on Human Resource Performance and the mediating role of E-Performance. A quantitative survey was conducted using total sampling of 116 State Civil Apparatus personnel. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The results show that Green Management positively affects Human Resource Performance ($\beta = 0.337$; $p < 0.001$) and E-Performance ($\beta = 0.267$; $p = 0.001$). Digital-Based Training positively affects Human Resource Performance ($\beta = 0.174$; $p = 0.034$) and E-Performance ($\beta = 0.471$; $p < 0.001$), while E-Performance positively affects Human Resource Performance ($\beta = 0.428$; $p < 0.001$). E-Performance also partially mediates the effects of Green Management ($\beta = 0.114$; $p = 0.005$) and Digital-Based Training ($\beta = 0.202$; $p < 0.001$) on Human Resource Performance. The structural model explains 44.4% of the variance in E-Performance and 65.0% of the variance in Human Resource Performance. These findings indicate that, within the Pidie Regency Regional Secretariat, integrating sustainability practices, digital capability development, and performance-management systems may strengthen employee performance.

Keywords: Green Management, Digital-Based Training, E-Performance, HR Performance.

INTRODUCTION

Improving human resource performance is a central concern of public-sector reform because local governments are increasingly required to combine effective service delivery with sustainability and digital transformation. Green Management can promote efficient resource use, environmentally responsible work practices, and employee engagement, while Digital-Based Training can strengthen the competencies required to work with digital systems. E-Performance, in turn, provides an information-technology-based mechanism for recording, monitoring, reporting, and evaluating employee performance (Sedarmayanti, 2017; Dumont et al., 2017; Straw et al., 2013), (Sitzmann et al., 2011; Lacerenza et al., 2016).

In the Regional Secretariat of Pidie Regency, these three dimensions are particularly relevant because performance management is increasingly connected to digital reporting and paperless administrative practices. The 2025 organizational records indicate that ASN performance achievement remained at approximately 76–82% of the organizational target. Paperless implementation also remained incomplete, with paper use reported at approximately 42–49 reams per month, while 48 of 116 ASN (40%) had not participated in digital-based training. These conditions indicate a practical problem involving digital competence, sustainable work practices, and the optimization of E-Performance.

Although previous studies have examined Green Management, Digital-Based Training, and electronic performance systems separately, less is known about the mechanism through which E-Performance connects sustainability-oriented management and digital capability development with human resource performance in a

local-government setting. This study therefore positions E-Performance as a mediating organizational mechanism rather than only as a performance-management outcome.

The contribution of this study is threefold. First, it integrates Green Management and Digital-Based Training in a single public-sector performance model. Second, it examines E-Performance as a mediating mechanism linking these organizational practices to Human Resource Performance. Third, it provides empirical evidence from the Regional Secretariat of Pidie Regency, thereby extending discussion of sustainable and digital human resource management into a local-government context. The study aims to test the direct effects of Green Management and Digital-Based Training on Human Resource Performance and E-Performance, as well as the indirect effects through E-Performance.

LITERATURE REVIEW

Green Management

Green Management is a strategic and holistic management approach in which a company integrates environmental considerations into all aspects of its operations, from planning, production, to marketing (Dumont et al., 2017).

According to the green management indicators, it consists of: (Tang et al., 2018)

- 1) Green Recruitment and Selection.
- 2) Green Training and Development.
- 3) Green Performance Compensation and Assessment.
- 4) Green Workplace Behavior.
- 5) Save resources.
- 6) Green Mobility
- 7) Green Communication and Collaboration
- 8) Green Engagement
- 9) Environmental Knowledge and Awareness
- 10) Job Satisfaction and Employer Branding

Digital-Based Training

Digital-Based Training is a learning approach that utilizes digital technology and internet connectivity to deliver materials, manage processes, and evaluate training results. This concept transforms the conventional training paradigm by integrating digital platforms such as Learning Management Systems (LMS), mobile applications, and cloud technologies to create an adaptive and scalable learning experience (Enter et al., 2025).

According to the dimensions of Digital-Based Training as follows (Asoodar et al., 2016):

1. Training Needs, which is this dimension measures the extent to which digital training is in accordance with the work needs and competencies of participants.
2. Training Content (Quality of Training Materials) is Measuring the quality of the content of the material provided in digital training.

3. Trainer Quality (Instructor Quality) is assessing the instructor's ability to deliver training digitally.
4. Technology is measuring the quality of systems and technology used in digital training.
5. Motivation is measuring the motivation of participants to participate in digital training.
6. Interaction is measuring the quality of interaction during the online training process.
7. Participant Satisfaction is a measure of the level of satisfaction of participants with the overall digital training.
8. Learning Outcome is a measure of the impact of training on improving participants' abilities.

Human Resource Performance

Human Resource Performance is defined as the output achieved by an individual or group, which is assessed from the aspects of quantity and quality, in carrying out tasks in accordance with the responsibilities given (Suryani et al., 2020).

Human Resource Performance Indicators According to the following: 1) Quality, 2) Quantity, 3) Timeliness, 4) Effectiveness, 5) Independence, 6) Interpersonal Impact (Koopmans et al., 2014).

E-performance

A digital-based employee performance management and evaluation system that utilizes information technology to facilitate the recording, monitoring, reporting, and assessment of employee performance in an effective, transparent, and integrated manner (AlMulhim, 2023).

E-Performance indicators include 1) Ease of Use, 2) System Quality, 3) Information Quality, 4) Monitoring, 5) Efficiency, 6) Transparency (AlMulhim, 2023).

RESEARCH METHODS

This type of research is survey research with a quantitative approach. This study focuses on the analysis of the influence of Green Management (X_1) and Digital-Based Training (X_2) on Human Resource Performance (Y) and E-Performance as a mediating variable (Z) in the Regional Secretariat of Pidie Regency.

The population consisted of 116 State Civil Apparatus personnel at the Regional Secretariat of Pidie Regency, and all members of the accessible population were included through total (saturated) sampling. The questionnaire was developed from the operational indicators of the four constructs and was administered to the respondents during the data-collection period.

Descriptive statistics were used to summarize respondent characteristics, while PLS-SEM was used to estimate the measurement and structural models, including the mediation paths involving E-Performance.

PLS-SEM was selected because the study is prediction-oriented and contains several latent constructs with a mediation structure. The analysis was conducted using SmartPLS 3.2.7 and consisted of assessment of the measurement model (outer model) and structural model (inner model).

Statistical significance was assessed using bootstrapping. Bootstrapping provides empirical sampling distributions for the estimated path coefficients and does not require multivariate normality. The use of 116 observations is also consistent with the study design because the sample represents the full accessible population of ASN at the research site. Thus, the sample size should be interpreted in relation to the defined population rather than as evidence that PLS-SEM has no sample-size considerations.

RESULTS AND DISCUSSION

Table 1. Respondent Characteristics

Category	Frequency	Presses
Gender		
Male	70	60.3
Women	46	39.7
Total	116	100.0
Age		
≤ 30 Years	14	12.1
31–40 Years	17	14.7
41-50 Years	46	39.7
> 50 Years	39	33.6
Total	116	100.0
Revenue		
< IDR 4 million	37	31.9
IDR4–6 million	66	56.9
IDR6–8 million	10	8.6
>IDR8 million	3	2.6
Total	116	100.0
State Civil Apparatus		
II/c	2	1.7
II/d	4	3.4
III/a	24	20.7
III/b	23	19.8
III/c	11	9.5
III/d	35	30.2
IV/a	4	3.4
IV/b	8	6.9
IV/c	3	2.6
IV/d	2	1.7
Total	116	100.0
Education Level		
SLTP	1	0.9
High School	22	19.0
D-3	5	4.3

D-4	9	7.8
S-1	64	55.2
S-2	14	12.1
S-3	1	0.9
Total	116	100.0
Tenure		
< 5 Years	12	10.3
5–10 Years	16	13.8
11–15 Years	2	1.7
>15 Years	86	74.1
Total	116	100.0
Departments		
Primary High Leadership	6	5.2
Administrator	10	8.6
Supervisor (Head of Subdivision)	2	1.7
Functional Position of Young Experts	20	17.2
Policy Technical Reviewer	35	30.2
Office Administration	12	10.3
Operator/Operational Service Manager	13	11.2
Other Administrative Implementers	18	15.5
Total	116	100.0

The study included all 116 State Civil Apparatus personnel at the Regional Secretariat of Pidie Regency. Most respondents were male (60.3%), aged 41–50 years (39.7%), had a monthly income of IDR 4–6 million (56.9%), were in Group III/d (30.2%), held a bachelor's degree (55.2%), had more than 15 years of service (74.1%), and occupied technical-policy positions (30.2%). These characteristics indicate that the sample contains substantial work experience and educational exposure, which is relevant to the implementation of Green Management, Digital-Based Training, and E-Performance.

Measurement-model assessment was conducted using outer loadings, internal consistency reliability, convergent validity, and discriminant validity.

Table 2. Measurement Model: Reliability and Convergent Validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
E-Performance (Z)	0.967	0.968	0.971	0.736
Green Management (X1)	0.953	0.954	0.960	0.704
Human Resource Performance (Y)	0.961	0.962	0.965	0.699
Digital-Based Training (X2)	0.971	0.973	0.974	0.729

All constructs exceeded the recommended thresholds for internal consistency and convergent validity. Cronbach's alpha ranged from 0.953 to 0.971, rho_A from 0.954 to 0.973, composite reliability from 0.960 to 0.974, and AVE from 0.699 to 0.736. These results indicate satisfactory internal consistency and convergent validity. The corrected AVE values are reported from the complete PLS output; they should not be confused with the reliability coefficients.

The outer-loading results from SmartPLS 3.2.7 show that all indicators loaded above 0.70 on their intended constructs. Across the 48 indicators, the observed outer loadings ranged from 0.787 to 0.895, indicating that all indicators met the criterion for convergent validity and were retained in the measurement model.

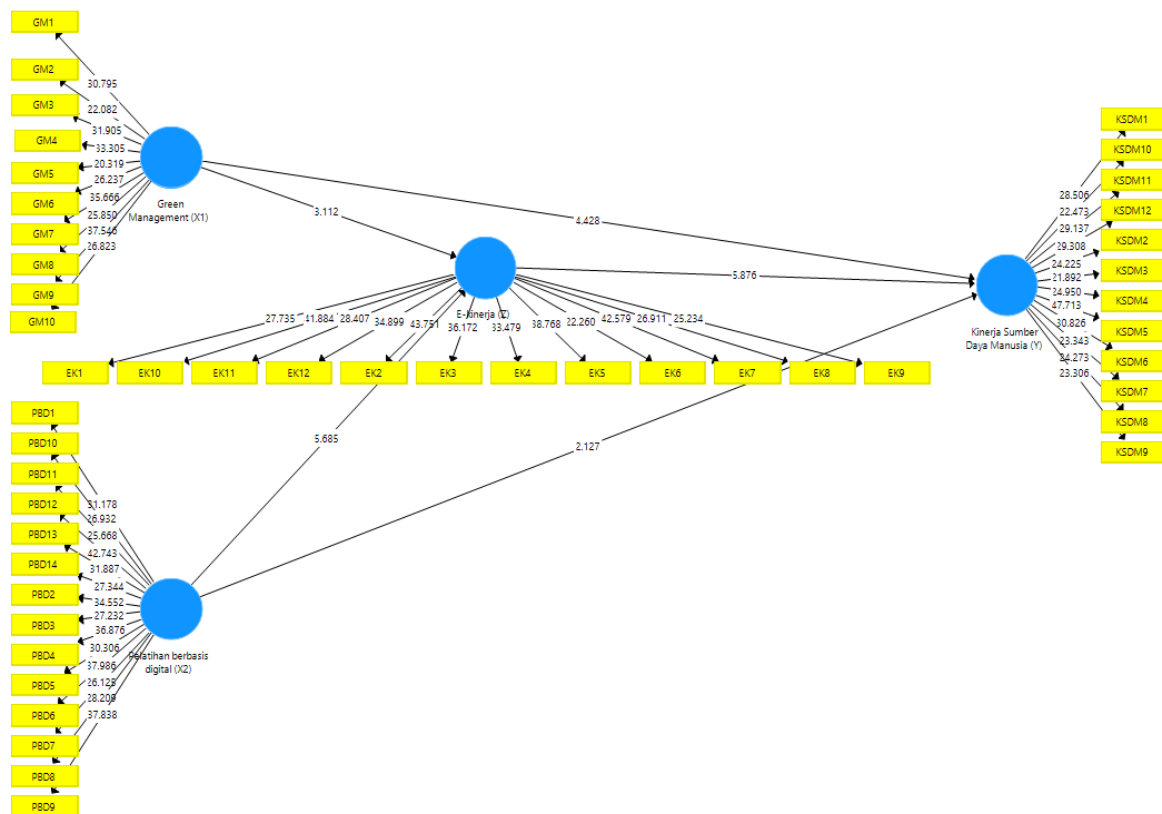


Figure 1. Outer Model Test Results

The loading results indicate adequate convergent validity because every indicator has its highest loading on the intended construct and all outer loadings exceed 0.70. Because the complete thesis output also contains cross-loading, Fornell-Larcker, and HTMT results, discriminant validity was assessed using all three approaches.

Discriminant validity was further assessed using the Fornell–Larcker criterion. This criterion compares the square root of the average variance extracted (AVE) for each construct with its correlations with the other constructs. A construct is considered to demonstrate adequate discriminant validity when the square root of its AVE is greater than its correlations with other constructs. The results are presented in Table 3.

Table 3. Discriminant Validity: Fornell–Larcker Criterion

Construct	E-Performance	Green Management	HR Performance	Digital-Based Training
E-Performance (Z)	0.858			
Green Management (X1)	0.549	0.839		
Human Resource Performance (Y)	0.723	0.676	0.836	
Digital-Based Training (X2)	0.631	0.598	0.646	0.854

As shown in Table 3, the square root of AVE for each construct is higher than its correlations with the other

constructs. The diagonal values are 0.858 for E-Performance, 0.839 for Green Management, 0.836 for Human Resource Performance, and 0.854 for Digital-Based Training. These values exceed the corresponding inter-construct correlations, indicating that each construct shares greater variance with its own indicators than with other constructs. Therefore, the Fornell–Larcker criterion supports the discriminant validity of the measurement model.

To provide an additional and more stringent assessment of discriminant validity, the heterotrait–monotrait ratio (HTMT) was examined. HTMT evaluates the similarity between constructs based on the correlations among their indicators. Values below the recommended threshold indicate that the constructs are empirically distinguishable. The HTMT results are presented in Table 4.

Table 4. Discriminant Validity: HTMT

Construct	E-Performance	Green Management	HR Performance
E-Performance (Z)			
Green Management (X1)	0.674		
Human Resource Performance (Y)	0.608	0.740	
Digital-Based Training (X2)	0.754	0.829	0.821

Table 4 shows that all HTMT values range from 0.608 to 0.829, with the highest value observed between Green Management and Digital-Based Training (HTMT = 0.829). All values are below the conservative threshold of 0.90, indicating that no pair of constructs exhibits excessive conceptual overlap. Thus, the HTMT results provide additional evidence that the four constructs have adequate discriminant validity. Taken together with the Fornell–Larcker results, the measurement model demonstrates satisfactory discriminant validity.

After establishing the adequacy of the measurement model, the structural model was evaluated by examining the coefficient of determination (R^2). R^2 indicates the proportion of variance in an endogenous construct that can be explained by its predictor constructs. Higher R^2 values indicate greater explanatory power of the structural model. The R^2 results for the endogenous constructs are presented in Table 5.

Table 5. R-Square

Item	R-Square	R-Square Adjusted
E-performance (Z)	0,444	0,435
Human Resource Performance (Y)	0,650	0,640

As presented in Table 5, the R^2 value for E-Performance is 0.444, with an adjusted R^2 of 0.435. This indicates that Green Management and Digital-Based Training jointly explain 44.4% of the variance in E-Performance. The remaining 55.6% is attributable to other factors not included in the present model. For Human Resource Performance, the R^2 value is 0.650, with an adjusted R^2 of 0.640, indicating that Green Management, Digital-Based Training, and E-Performance jointly explain 65.0% of the variance in Human Resource Performance. These results indicate that the structural model has substantial explanatory power within the context of the Regional Secretariat of Pidie Regency.

In addition to R^2 , effect size (f^2) was assessed to determine the substantive contribution of each exogenous construct to the R^2 value of the endogenous construct. While R^2 evaluates the explanatory power of the model as a whole, f^2 indicates how much the explained variance changes when a particular predictor is omitted from the structural model. The effect-size results are presented in Table 6.

Table 6. Effect Size (f^2)

Structural Path	f^2	Interpretation
Green Management → E-Performance	0.027	Small
Green Management → HR Performance	0.049	Small

Digital-Based Training → E-Performance	0.297	Medium
Digital-Based Training → HR Performance	0.331	Medium
E-Performance → HR Performance	0.000	Negligible

The results in Table 6 show that Green Management has a small effect size on E-Performance ($f^2 = 0.027$) and Human Resource Performance ($f^2 = 0.049$). In contrast, Digital-Based Training demonstrates medium effect sizes on both E-Performance ($f^2 = 0.297$) and Human Resource Performance ($f^2 = 0.331$), indicating a more substantive contribution to the explained variance of these endogenous constructs. The f^2 value for E-Performance on Human Resource Performance is 0.000, indicating a negligible incremental contribution to the R^2 value when this predictor is considered independently. Importantly, this does not contradict the significant path coefficient reported later, because statistical significance and effect size assess different aspects of a structural relationship.

Predictive relevance was subsequently assessed using the Stone–Geisser Q^2 statistic. Unlike R^2 , which evaluates explanatory power, Q^2 assesses the predictive relevance of the structural model for endogenous constructs. A Q^2 value greater than zero indicates that the model has predictive relevance for the endogenous construct. The predictive-relevance results are presented in Table 7.

Table 7. Predictive Relevance (Q^2)

Endogenous Construct	R^2	Interpretation
E-Performance (Z)	0.444	55.6% unexplained
HR Performance (Y)	0.650	35.0% unexplained
Overall Q^2 predictive relevance	0.8054	Positive predictive relevance
Structural Path	f^2	Interpretation
Green Management → E-Performance	0.027	Small
Green Management → HR Performance	0.049	Small
Digital-Based Training → E-Performance	0.297	Medium
Digital-Based Training → HR Performance	0.331	Medium
E-Performance → HR Performance	0.000	Negligible

The results indicate a positive predictive relevance of the structural model, with an overall Q^2 value of 0.8054. Because the value is greater than zero, the model demonstrates predictive relevance for the endogenous constructs. This finding complements the R^2 results by indicating that the model is not only capable of explaining variance in the endogenous constructs but also possesses predictive relevance within the observed data.

Following the evaluation of the structural model, hypothesis testing was conducted by examining the path coefficients, t-statistics, and p-values obtained through bootstrapping. A structural relationship is considered statistically significant when the p-value is below 0.05. The direct effects of Green Management, Digital-Based Training, and E-Performance on the endogenous constructs are presented in Table 8.

Table 8. Direct Effects Path Coefficients / Direct Effects

Construct Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
Green Management (X1) → Human Resource Performance (Y)	0,337	0,343	0,078	4,341	0,000
Green Management (X1) → E-performance (Z)	0,267	0,277	0,083	3,217	0,001
Digital-based training (X2) → Human Resource Performance (Y)	0,174	0,170	0,082	2,123	0,034

Digital-based training (X2) -> E-performance (Z)	0,471	0,467	0,086	5,508	0,000
E-performance (Z) -> Human Resource Performance (Y)	0,428	0,427	0,073	5,890	0,000

The direct-effects results show that all five hypothesized paths are positive and statistically significant. Green Management positively affects HR Performance ($\beta = 0.337$, $t = 4.341$, $p < 0.001$) and E-Performance ($\beta = 0.267$, $t = 3.217$, $p = 0.001$). Digital-Based Training positively affects HR Performance ($\beta = 0.174$, $t = 2.123$, $p = 0.034$) and E-Performance ($\beta = 0.471$, $t = 5.508$, $p < 0.001$). E-Performance also positively affects HR Performance ($\beta = 0.428$, $t = 5.890$, $p < 0.001$).

The following is a test of the influence of exogenous variables on endogenous variables and must be significant at a t-statistic value greater than 1.96.

Table 9. Specific Indirect Effects Specific Indirect Effects

Construct Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values
Green Management (X1) -> E-performance (Z) -> Human Resource Performance (Y)	0,114	0,118	0,041	2,795	0,005
Digital-based training (X2) -> E-performance (Z) -> Human Resource Performance (Y)	0,202	0,199	0,050	4,066	0,000

Both indirect effects are positive and significant. Green Management has an indirect effect on HR Performance through E-Performance of $\beta = 0.114$ ($t = 2.795$, $p = 0.005$), while Digital-Based Training has an indirect effect of $\beta = 0.202$ ($t = 4.066$, $p < 0.001$). Because the corresponding direct effects remain significant, E-Performance functions as a partial mediator. The larger indirect coefficient for Digital-Based Training indicates that the digital-training pathway is more strongly transmitted through E-Performance in this setting.

DISCUSSION

Green Management Affects Human Resource Performance in the Regional Secretariat of Pidie Regency

Green Management has a positive and significant effect on HR Performance ($\beta = 0.337$, $p < 0.001$). The result indicates that sustainability-oriented practices such as resource efficiency, reduced paper use, environmentally responsible work behavior, and organizational support can be associated with better work quality, productivity, and discipline among state's civil apparatus.

The finding is consistent with studies linking Green HRM practices with employee performance and pro-environmental workplace behavior (Dumont et al., 2017; Chaudhary, 2020; Widagdo et al., 2024). In the present public-sector context, however, the small f^2 value (0.049) suggests that Green Management is one contributing factor rather than a standalone explanation of HR Performance. Its effect should therefore be interpreted alongside Digital-Based Training and E-Performance.

Green Management affects E-performance in the Regional Secretariat of Pidie Regency

Green Management positively affects E-Performance ($\beta = 0.267$, $p = 0.001$). A sustainability-oriented work culture can encourage reduced use of physical documents, greater use of digital administration, and more efficient resource management. These practices are compatible with the operational logic of E-Performance because both emphasize systematic recording, monitoring, and accountability.

The finding is consistent with the broader Sustainable HRM literature, which links sustainability-oriented organizational practices with employee and organizational effectiveness (Jerónimo et al., 2020; Islam, 2020). However, the small f^2 value (0.027) indicates that Green Management makes only a small incremental contribution to the explained variance in E-Performance. This suggests that Green Management supports digital performance management but is not the dominant driver of E-Performance in this sample.

Digital-based training affects the Performance of Human Resources at the Regional Secretariat of Pidie Regency

Digital-Based Training positively affects HR Performance ($\beta = 0.174$, $p = 0.034$). The relationship indicates that training can improve knowledge, digital skills, and the ability to complete work effectively and on time. Although the coefficient is smaller than the coefficient for the Digital-Based Training $\rightarrow$ E-Performance path, the direct effect remains statistically meaningful. This finding is consistent with evidence that well-designed training improves knowledge transfer and individual performance (Lacerenza et al., 2016). From a Human Capital perspective, training is an investment that develops employee capabilities. The medium f^2 value (0.331) also indicates a meaningful incremental contribution of Digital-Based Training to HR Performance, supporting the need for training programs that are aligned with job requirements and followed by opportunities to apply newly acquired skills.

Digital-based training affects E-performance at the Regional Secretariat of Pidie Regency

Digital-Based Training has the strongest direct path to E-Performance in the model ($\beta = 0.471$, $p < 0.001$). The result suggests that training is important for helping ASN understand digital applications, performance-reporting procedures, and the use of information technology in daily administrative work.

The finding is consistent with studies showing that training and digital-technology exposure can improve employees' readiness to use electronic performance systems (Husna et al., 2025; Tobari, 2025). The Technology Acceptance Model provides a useful explanation: training can increase perceived competence and reduce barriers to system use, which may strengthen employees' willingness and ability to use E-Performance. The medium f^2 value (0.297) further indicates that Digital-Based Training makes a meaningful incremental contribution to explaining E-Performance.

E-performance affects Human Resources Performance in the Regional Secretariat of Pidie Regency

E-Performance has a positive and significant association with HR Performance ($\beta = 0.428$, $p < 0.001$). In the Pidie Regency Regional Secretariat, the system can support target setting, activity reporting, monitoring, and performance evaluation, thereby increasing clarity and accountability in daily work.

This finding is consistent with research showing that electronic performance monitoring and digital performance systems can improve job performance by strengthening information, supervision, and accountability (Zhang et al., 2025). The result is also consistent with the Technology Acceptance Model insofar as employees are more likely to benefit from a system when it is perceived as useful and manageable. However, the f^2 value of 0.000 indicates that the incremental contribution of E-Performance to R^2 is negligible when assessed separately. Thus, its importance in this model is better understood together with the other predictors and its mediating role rather than as an isolated determinant.

E-performance plays a role in mediating the influence of Green Management on Human Resource Performance in the Regional Secretariat of Pidie Regency

E-Performance partially mediates the relationship between Green Management and HR Performance ($\beta = 0.114$, $p = 0.005$). This suggests that Green Management contributes to performance not only through direct changes in work behavior and resource efficiency, but also by encouraging digitalized administrative practices that can be recorded and monitored through E-Performance.

The finding extends prior work on Green HRM and employee performance (Dumont et al., 2017; Widagdo et al., 2024) by identifying E-Performance as a possible implementation mechanism in a local-government context. From the Resource-Based View, Green Management and E-Performance can be interpreted as complementary organizational resources: sustainability-oriented practices establish the desired work behavior, while the digital performance system helps translate, monitor, and evaluate those practices.

E-performance plays a role in mediating the influence of digital-based training on Human Resource Performance at the Regional Secretariat of Pidie Regency

E-Performance partially transmits the effect of Digital-Based Training to HR Performance ($\beta = 0.202$, $p < 0.001$). Digital training can improve employees' ability to use digital applications, understand reporting procedures, and translate performance information into daily work practices. The significant direct effect of Digital-Based Training on HR Performance ($\beta = 0.174$) shows that training also improves performance through competencies that do not depend entirely on E-Performance.

This finding is consistent with evidence that digital technology use and training can strengthen electronic performance practices and employee outcomes (Husna et al., 2025; Tobari, 2025). From a Human Capital perspective, training creates productive employee capabilities, while E-Performance provides an organizational mechanism through which those capabilities can be applied, monitored, and evaluated. The practical implication is that digital training should be linked explicitly to the functions and performance indicators used in E-Performance.

Limitations and Future Research

This study has several limitations. First, all constructs were measured using self-reported questionnaire data from a single respondent group, so common method bias cannot be completely ruled out. Second, the cross-sectional design limits causal interpretation over time. Third, the study was conducted only at the Regional Secretariat of Pidie Regency; therefore, the findings should not be generalized automatically to other government institutions or regions. Finally, the model explains 44.4% of the variance in E-Performance and 65.0% of the variance in HR Performance, indicating that other determinants remain outside the model.

Future research should consider multi-institution samples, longitudinal designs, and mixed-method approaches. Qualitative interviews could also explore why some ASN do not participate in digital training, how employees experience Green Management practices, and what organizational barriers affect the implementation of E-Performance.

CONCLUSION

The findings indicate that Green Management and Digital-Based Training are positively associated with HR Performance and E-Performance, while E-Performance is positively associated with HR Performance. E-Performance also partially mediates the relationships of Green Management and Digital-Based Training with HR Performance. Within the Regional Secretariat of Pidie Regency, the results suggest that sustainability-oriented management, digital capability development, and performance-management systems should be implemented as complementary practices rather than as isolated interventions.

The model explains 44.4% of the variance in E-Performance and 65.0% of the variance in HR Performance. The strongest direct path to E-Performance is Digital-Based Training ($\beta = 0.471$), while the strongest direct path to HR Performance is E-Performance ($\beta = 0.428$). These findings provide practical support for integrating digital training with E-Performance and embedding measurable Green Management practices into routine public-sector work processes.

Suggestion

Based on the findings, the Regional Secretariat of Pidie Regency should: (1) align digital-based training with the competencies required for E-Performance; (2) use E-Performance consistently for target setting, reporting,

monitoring, and evaluation; (3) incorporate Green Management indicators such as paperless administration, energy efficiency, and waste reduction into relevant performance practices; (4) evaluate training transfer by requiring employees to demonstrate how newly acquired digital competencies are applied to daily tasks; and (5) use periodic performance dashboards to identify implementation gaps and support managerial decisions.

REFERENCES

1. AlMulhim, A. F. (2023). The impact of administrative management and information technology on e-government success: The mediating role of knowledge management practices. *Cogent Business & Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2202030>
2. Anisah, D. N., & Wardoyo, D. T. W. (2025). Pengaruh pelatihan online dan pengembangan karier terhadap kinerja karyawan. *Jurnal Ilmu Manajemen*, 695–706. <https://doi.org/10.26740/jim.v13n3.p695-706>
3. Asoodar, M., Vaezi, S., & Izanloo, B. (2016). Framework to improve e-learner satisfaction and further strengthen e-learning implementation. *Computers in Human Behavior*, 63, 704–716. <https://doi.org/10.1016/J.CHB.2016.05.060>
4. Chaudhary, R. (2020). Green Human Resource Management and Employee Green Behavior: An Empirical Analysis. *Corporate Social Responsibility and Environmental Management*, 27(2), 630–641. <https://doi.org/10.1002/csr.1827>
5. Dumont, J., Shen, J., & Deng, X. (2017). Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Human Resource Management*, 56(4), 613–627. <https://doi.org/10.1002/hrm.21792>
6. Entriza, A. N., & Puspitasari, F. F. (2025). Studi literatur: Integrasi teknologi informasi dalam pelatihan guru sebagai upaya meningkatkan kualitas pembelajaran. *Al-Idarah: Jurnal Kependidikan Islam*, 15(1), 62–73. <https://doi.org/10.24042/b2zk9f46>
7. Husna, N., Zulkifli, & Najmi, I. (2025). The Influence of Digital Technology use and Additional Employee Income on Employee Performance Mediated by the use of the E-Performance Application in Sub-District Offices in Pidie Regency. *IJRISS Vol 9 Issue 10*, 9(10), 8611–8624. <https://doi.org/10.47772/IJRISS.2025.910000701>
8. Islam, M. K. (2020). Green Human Resource Management Practices And Employee Performance In Malaysian Hotel Industry. 835–843. <https://doi.org/10.15405/EPSBS.2020.12.05.90>
9. Jerónimo, H. M., de Lacerda, T. C., & Henriques, P. L. (2020). From Sustainable HRM to Employee Performance: A Complex and Intertwined Road. *European Management Review*, 17(4), 871–884. <https://doi.org/10.1111/emre.12402>
10. Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C. W., & Van Der Beek, A. J. (2014). Measuring individual work performance: Identifying and selecting indicators. *Work*, 48(2), 229–238. <https://doi.org/10.3233/WOR-131659;WGROU:STRING:PUBLICATION>
11. Lacerenza, C. N., Reyes, D. L., Marlow, S. L., Joseph, D. L., & Salas, E. (2016). Leadership training design, delivery, and implementation: A meta-analysis.
12. Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2013). The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study. *Journal of Business Ethics* 121:3, 121(3), 451–466. <https://doi.org/10.1007/S10551-013-1732-0>
13. Permadi, I. K. O. , & Agustina, I. A. S. (2025). Green Hrm On Employee Performance: The Role Of Employee Engagement As A Mediator. *Jurnal Muara Ilmu Ekonomi Dan Bisnis*, 9(1), 1–13.
14. Sedarmayanti. (2017). *Manajemen Sumber Daya Manusia. Reformasi Birokrasi Manajemen Sumber Daya Manusia*. Aditama Jakarta.
15. Sitzmann, T., & Ely, K. (2011). A meta-analysis of self-regulated learning in work-related training and educational attainment: What we know and where we need to go. *Psychological Bulletin*, 137(3), 421–442. <https://doi.org/10.1037/a0022777>.
16. Suryani, N., Sugianingrat, I., & Laksemini, K. (2020). Kinerja sumber daya manusia: Teori, aplikasi dan penelitian.
17. Syafrinadina, S., Prawirosumarto, S., & Lusiana, L. (2025). Analysis of the E-Performance System and Competence on Employee Performance with Work Motivation as a Mediator.

18. Syamsulbahri, S., & Bardai, B. (2025). The Effect of Learning and Development Programs, Digital Communication Platforms, and Performance Management Systems on Employee Productivity in Digital.
19. Tang, G., Chen, Y., Jiang, Y., Paillé, P., & Jia, J. (2018). Green human resource management practices: scale development and validity.
20. Tobari, T. (2025). The Impact of Training, Culture, and Leadership on Electronic Performance. *Jurnal Ilmiah Manajemen Kesatuan*, 13(3), 1609–1620. <https://doi.org/10.37641/JIMKES.V13I3.3201>
21. Widagdo, C. S. , Palupiningtyas, D. , Nugraheni, K. S. , Maria, A. D. , & Octafian, R. (2024). Green HRM as a driver of hotel employee performance: The intervening role of environmentally friendly workplace behaviors.
22. Zhang, N., Sun, X., & Sciences, C. J.-B. (2025). Effect of electronic performance monitoring on employees' job performance: A social information processing perspective.